

FC 351.1

10/12/99

INFORMATIONAL UPDATE!!

FROM: Monique T. Lay, Earthquake Program Manager

SUBJECT: Earthquake Activity in Montana!!

One of the most potentially devastating risks we face here in the State of Montana is earthquakes. The designation of October as "Earthquake Preparedness Month" has been a highly successful campaign in boosting the awareness of risk in our state. To further enhance our efforts, we will be sending out an earthquake update each week throughout the month of October. This report will include recent earthquake activity for Montana and its surrounding area as it is posted on the Montana Bureau of Mines and Geology website (<http://quake.wr.usgs.gov/cgi-bin/quake/mbmgsun.mtech.edu>). In addition, this update includes a list of the top ten largest earthquakes in the United States. If you have any questions, comments or concerns, please call me at _(406) 841-3963 or email me at _mlay@state.mt.us.

Remember

**Earthquakes
Rock!**

Know your risk...be prepared!!

10/12/99

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Date-(UTC) -TIME yy/mm/dd hh:mm:ss	LAT deg.	LONG deg.	DEP km	MAG MI	Geographic Location/Comments
99/09/29 03:15:34	44.73N	111.82W	9.4	1.1	Gravelly Range
99/09/29 03:16:03	46.94N	112.74W	5.9	1.0	near Lincoln
99/09/29 06:39:04	44.83N	111.51W	6.3	1.7	S Madison Valley
99/09/29 10:34:13	44.80N	112.76W	9.1	1.2	Red Rock Valley
99/09/29 10:43:36	44.79N	112.76W	8.7	1.0	Red Rock Valley
99/09/29 15:13:18	44.99N	111.59W	5.9	1.0	S Gravelly Range
99/09/30 04:29:18	46.99N	114.56W	10.0	1.6	near Alberton
99/09/30 05:59:36	46.97N	114.30W	10.0	1.4	near Alberton
99/09/30 06:01:27	47.00N	114.58W	10.0	1.6	near Alberton
99/09/30 11:12:12	46.16N	111.88W	5.2	1.5	20 km ESE of Boulder
99/09/30 15:30:44	44.85N	111.79W	8.8	1.3	S Gravelly Range
99/10/01 01:41:03	44.80N	112.76W	9.1	2.8	Red Rock Valley
99/10/01 19:33:29	46.82N	112.97W	6.4	1.8	near Helmville
99/10/02 19:14:46	44.75N	111.97W	5.9	1.2	S Gravelly Range
99/10/02 23:21:02	46.95N	113.31W	8.7	1.1	10 km E of Greenough
99/10/03 16:17:57	44.75N	110.94W	5.0	2.0	Hebgen Lake region
99/10/03 22:56:06	45.59N	111.69W	6.0	1.2	near Norris
99/10/04 21:39:32	44.73N	112.92W	1.8	1.1	Tendoy Range
99/10/05 09:56:05	44.78N	113.49W	3.6	1.3	15 km NW of Leadore, ID
99/10/05 15:53:35	46.89N	112.56W	8.6	1.2	10 km SE of Lincoln
99/10/06 07:41:14	44.75N	110.94W	4.0	1.6	Hebgen Lake region
99/10/06 16:20:27	44.78N	116.16W	0.7	3.0	15 km S of McCall, ID
99/10/06 23:22:36	46.90N	112.97W	6.3	1.5	near Helmville
99/10/07 04:23:32	44.24N	110.76W	0.5	2.8	SW Yellowstone
99/10/07 07:16:27	45.67N	112.16W	6.3	1.8	25 km S of Whitehall
99/10/07 16:32:50	44.75N	110.94W	4.9	2.7	Hebgen Lake region
99/10/07 19:06:12	44.78N	116.12W	10.0	2.9	15 km S of McCall, ID
99/10/08 12:17:17	44.75N	110.94W	5.3	2.2	Hebgen Lake region
99/10/09 10:48:33	44.75N	110.94W	5.4	2.3	Hebgen Lake region
99/10/09 16:10:49	44.75N	110.94W	5.7	2.2	Hebgen Lake region
99/10/10 03:18:07	44.97N	111.75W	5.1	1.7	S Gravelly Range
99/10/10 04:54:22	47.65N	114.12W	0.3	2.1	near Polson

Please note that earthquake times and dates are given in Coordinated
Universal Time. Subtract 6 hours to get Daylight Savings Time.

THE TEN LARGEST EARTHQUAKES IN THE UNITED STATES

	Mag	Date (UTC)	Location
1.	9.2	March 28, 1964	Prince William Sound, Alaska
2.	8.8	March 9, 1957	Andreanof Islands, Alaska
3.	8.7	February 4, 1965	Rat Islands, Alaska
4.	8.3	November 10, 1938	East of Shumagin Islands, Alaska
	8.3	July 10, 1958	Lituya Bay, Alaska
6.	8.2	September 10, 1899	Yakutat Bay, Alaska
	8.2	September 4, 1899	near Cape Yakataga, Alaska
8.	8.0	May 7, 1986	Andreanof Islands, Alaska
9.	7.9	February 7, 1812	New Madrid, Missouri
	7.9	January 9, 1857	Fort Tejon, California
	7.9	April 3, 1868	Ka'u District, Island of Hawaii
	7.9	October 9, 1900	Kodiak Island, Alaska
	7.9	November 30, 1987	Gulf of Alaska

THE TEN LARGEST EARTHQUAKES IN THE CONTIGUOUS UNITED STATES

	Mag	Date (UTC)	Location
1.	7.9	February 7, 1812	New Madrid, Missouri
	7.9	January 9, 1857	Fort Tejon, California
3.	7.8	March 26, 1872	Owens Valley, California
	7.8	February 24, 1892	Imperial Valley, California
5.	7.7	December 16,	1811(0815) New Madrid, Missouri area
	7.7	April 18, 1906	San Francisco, California
	7.7	October 3, 1915	Pleasant Valley, Nevada
8.	7.6	January 23, 1812	New Madrid, Missouri
9.	7.5	August 18, 1959	Hebgen Lake, Montana
	7.5	July 21, 1952	Kern County, California
10.	7.3	November 4, 1927	west of Lompoc, California
	7.3	December 16, 1954	Dixie Valley, Nevada
	7.3	October 28, 1983	Borah Peak, Idaho

Note: Widely differing magnitudes have been computed for some of these earthquakes; the values differ according to the methods and data used. For example, some sources list the magnitude of the 8.7 Rat Islands earthquake as low as 7.7. On the other hand, some sources list the magnitude of the February 7, 1812 New Madrid quake as high as 8.8. Similar variations exist for most events on this list, although generally not so large as for the examples given.

In general, the magnitudes given in the list above have been determined from the seismic moment, when available. For very large earthquakes, the moment magnitude is considered to be a more accurate determination than the traditional amplitude magnitude computation procedures. Note that all of these values can be called "magnitudes on the Richter scale," regardless of the method used to compute them.

Source: C.W. Stover and J.L. Coffman, Seismicity of the United States, 1568-1989 (Revised), U.S. Geological Survey Prof. Paper 1527, 1993.